FIG.1

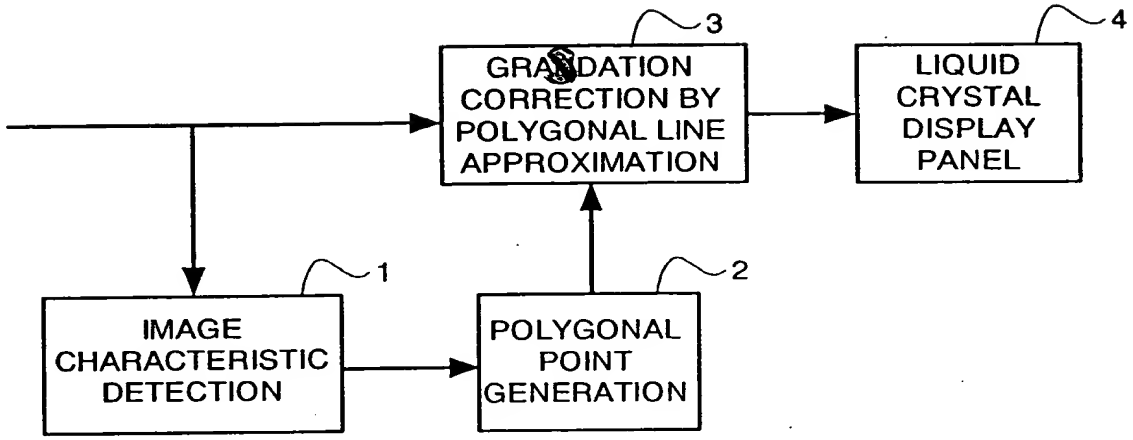

3
4
GRADATION CORRECTION BY POLYGONAL LINE APPROXIMATION
LIQUID CRYSTAL DISPLAY PANEL
1
2
IMAGE CHARACTERISTIC DETECTION
POLYGONAL POINT GENERATION

FIG.2

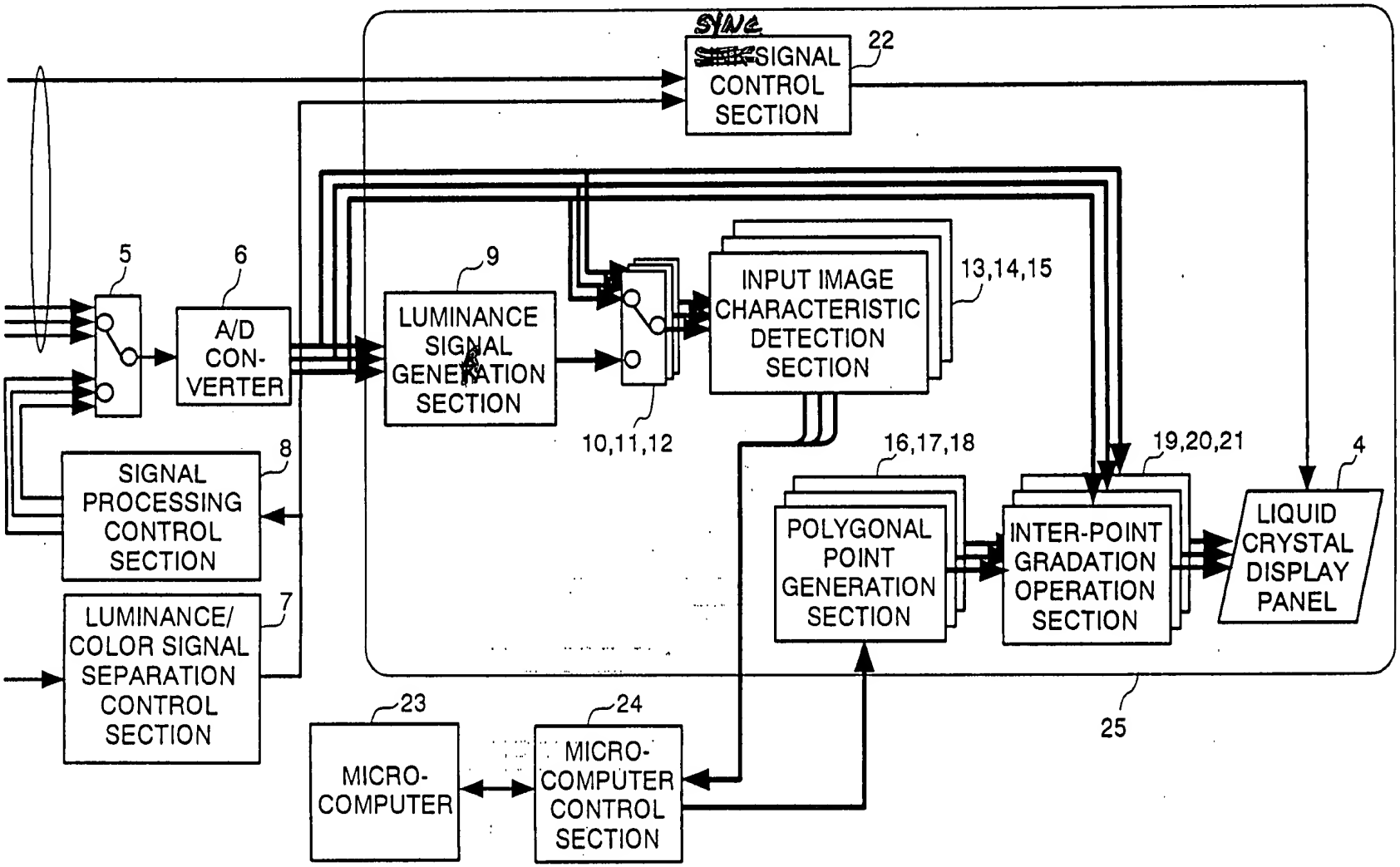

SYNC SIGNAL CONTROL SECTION
22
5
6
A/D CON-VERTER
9
LUMINANCE SIGNAL GENERATION SECTION
10,11,12
INPUT IMAGE CHARACTERISTIC DETECTION SECTION
13,14,15
8
SIGNAL PROCESSING CONTROL SECTION
7
LUMINANCE/ COLOR SIGNAL SEPARATION CONTROL SECTION
16,17,18
POLYGONAL POINT GENERATION SECTION
19,20,21
INTER-POINT GRADATION OPERATION SECTION
4
LIQUID CRYSTAL DISPLAY PANEL
25
23
MICRO-COMPUTER
24
MICRO-COMPUTER CONTROL SECTION

FIG.15

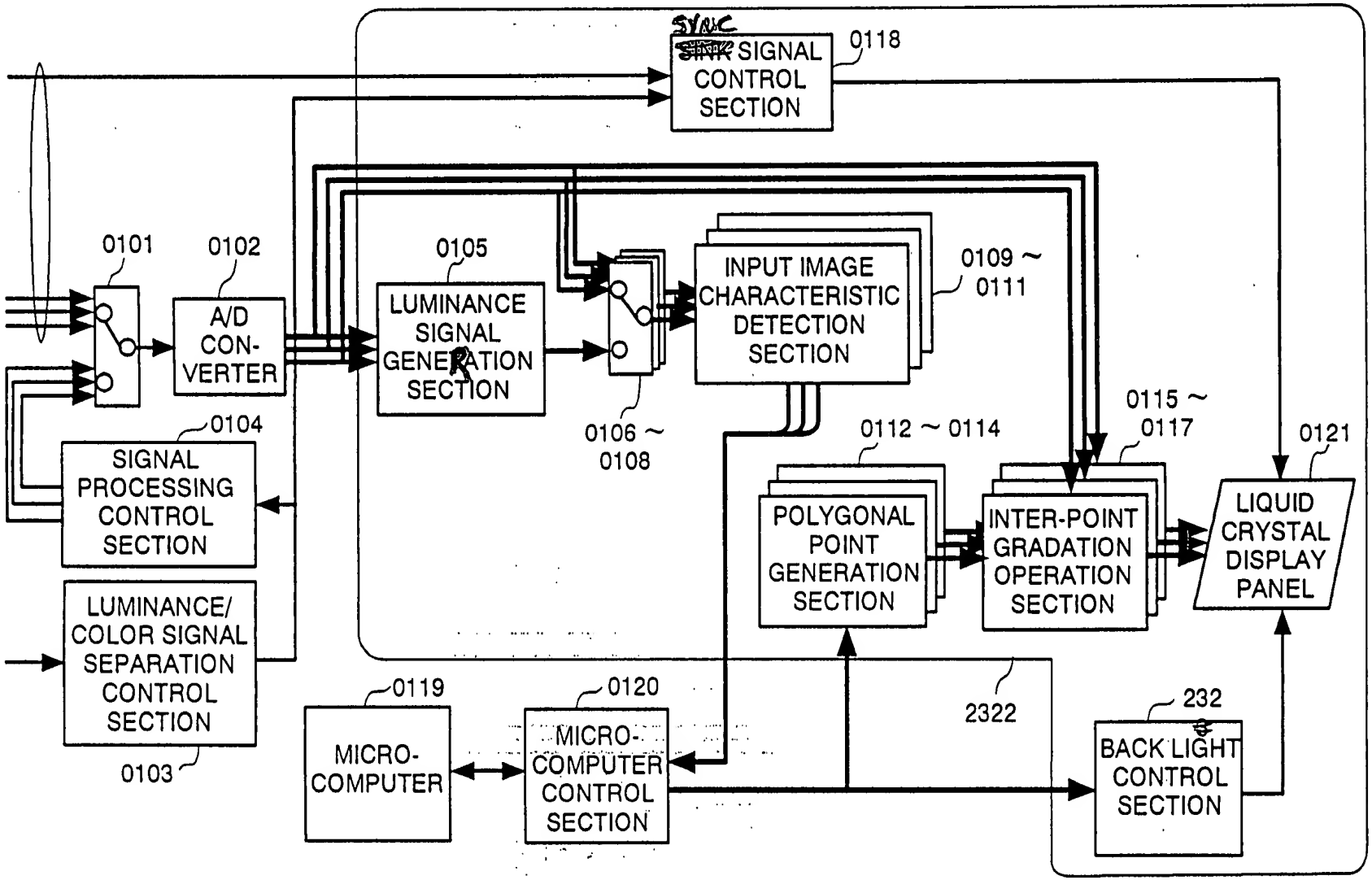

SYNC
SIGNAL CONTROL SECTION
0118
0101
0102
A/D CON-VERTER
0105
LUMINANCE SIGNAL GENERATION SECTION
INPUT IMAGE CHARACTERISTIC DETECTION SECTION
0109 ~ 0111
0106 ~ 0108
0104
SIGNAL PROCESSING CONTROL SECTION
0112 ~ 0114
0115 ~ 0117
0121
POLYGONAL POINT GENERATION SECTION
INTER-POINT GRADATION OPERATION SECTION
LIQUID CRYSTAL DISPLAY PANEL
LUMINANCE/ COLOR SIGNAL SEPARATION CONTROL SECTION
0103
0119
0120
MICRO-COMPUTER
MICRO-COMPUTER CONTROL SECTION
2322
232
BACK LIGHT CONTROL SECTION

FIG.18

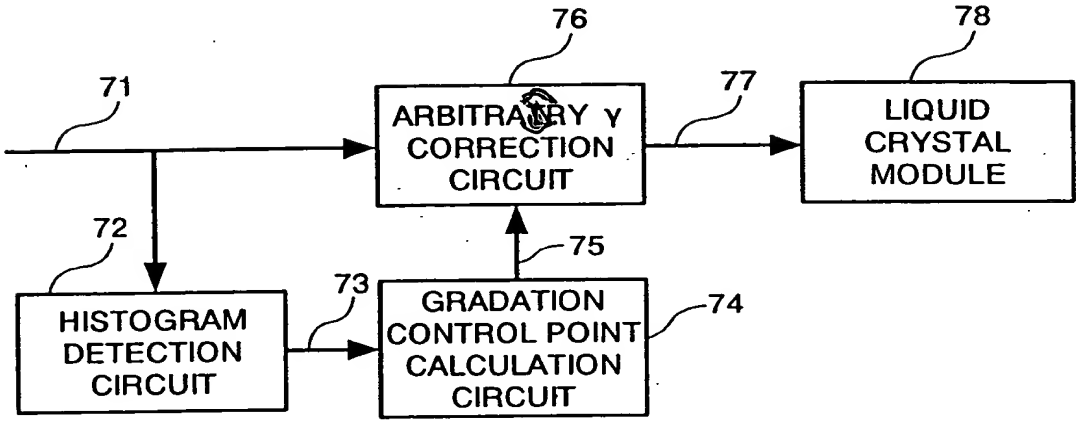

71
76
ARBITRARY γ CORRECTION CIRCUIT
77
78
LIQUID CRYSTAL MODULE
72
HISTOGRAM DETECTION CIRCUIT
73
75
GRADATION CONTROL POINT CALCULATION CIRCUIT
74

FIG.19

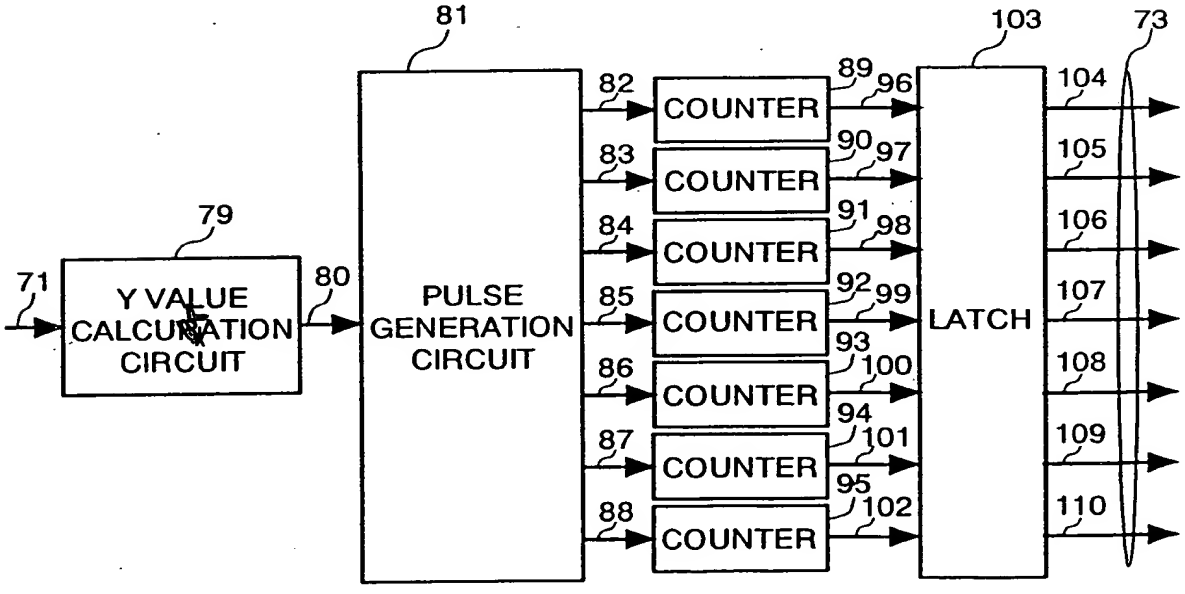

81
103
73
79
71
Y VALUE CALCULATION CIRCUIT
80
PULSE GENERATION CIRCUIT
82
83
84
85
86
87
88
COUNTER
89
90
91
92
93
94
95
96
97
98
99
100
101
102
LATCH
104
105
106
107
108
109
110

FIG.29

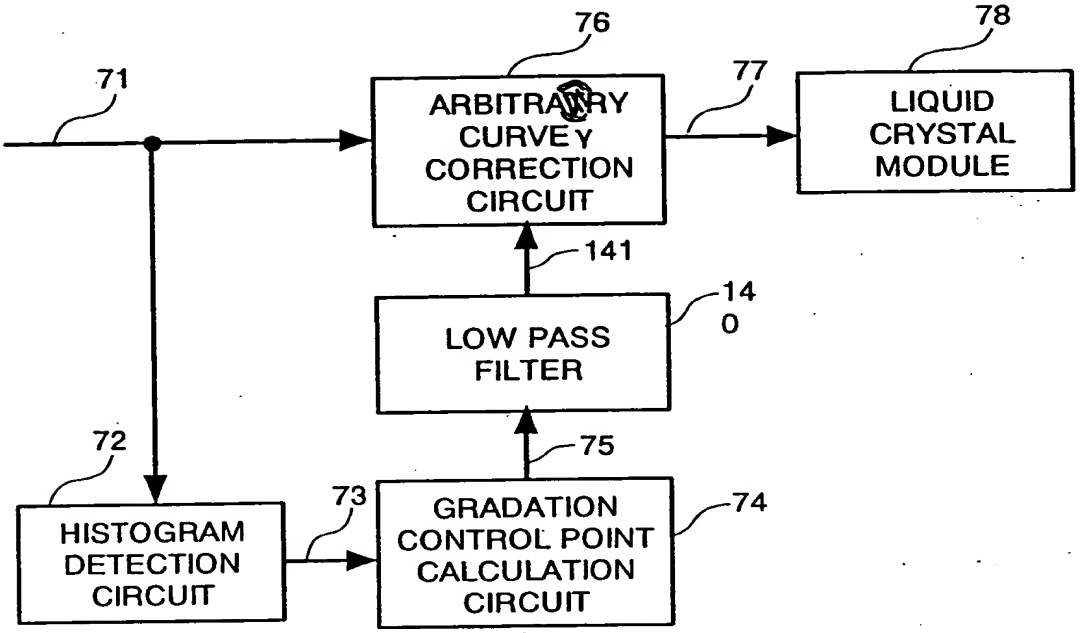

71
76
ARBITRARY CURVE γ CORRECTION CIRCUIT
77
78
LIQUID CRYSTAL MODULE
141
140
LOW PASS FILTER
72
75
73
HISTOGRAM DETECTION CIRCUIT
GRADATION CONTROL POINT CALCULATION CIRCUIT
74

FIG.30

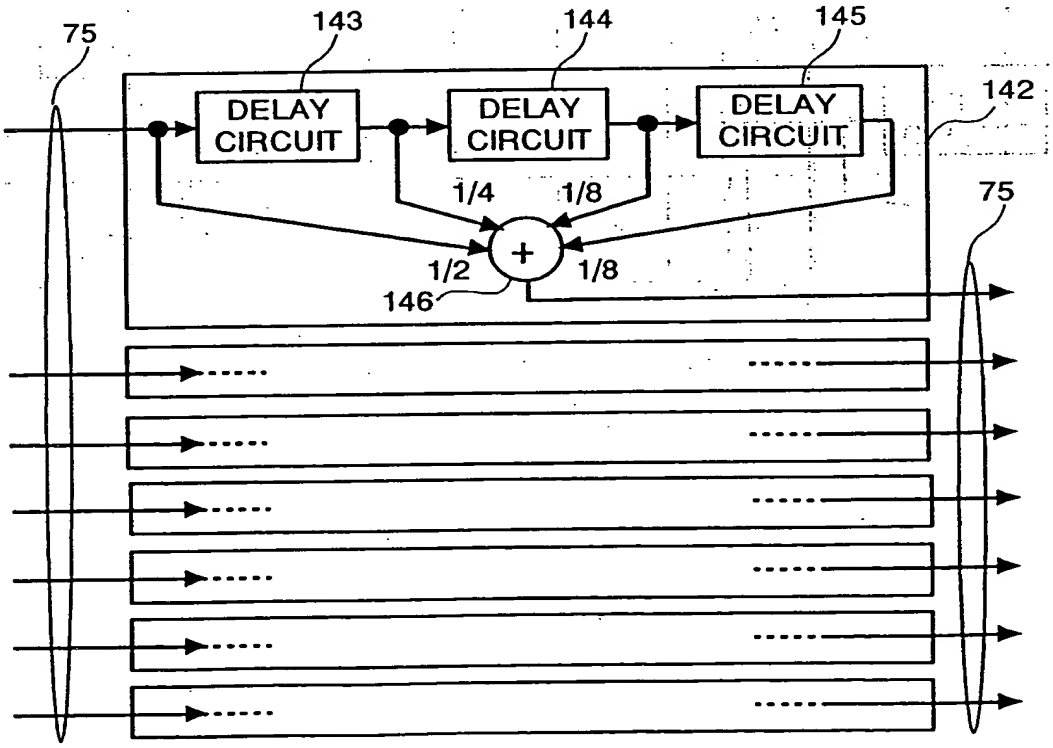

75
143
144
145
142
DELAY CIRCUIT
DELAY CIRCUIT
DELAY CIRCUIT
1/4
1/8
1/2
1/8
146
75

FIG.31

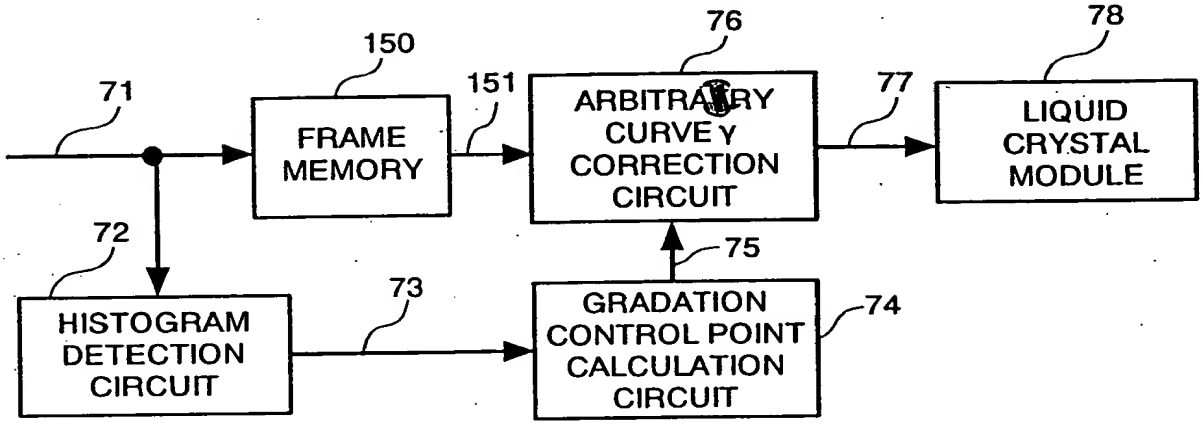

71
150
FRAME MEMORY
151
76
ARBITRARY CURVE γ CORRECTION CIRCUIT
77
78
LIQUID CRYSTAL MODULE
72
HISTOGRAM DETECTION CIRCUIT
73
75
GRADATION CONTROL POINT CALCULATION CIRCUIT
74

FIG.32

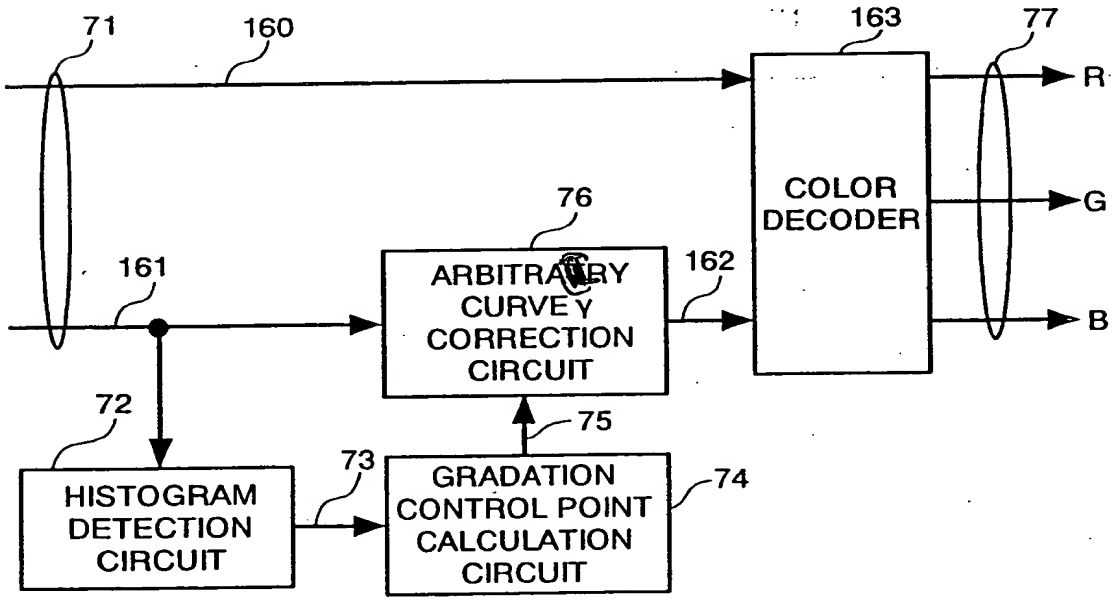
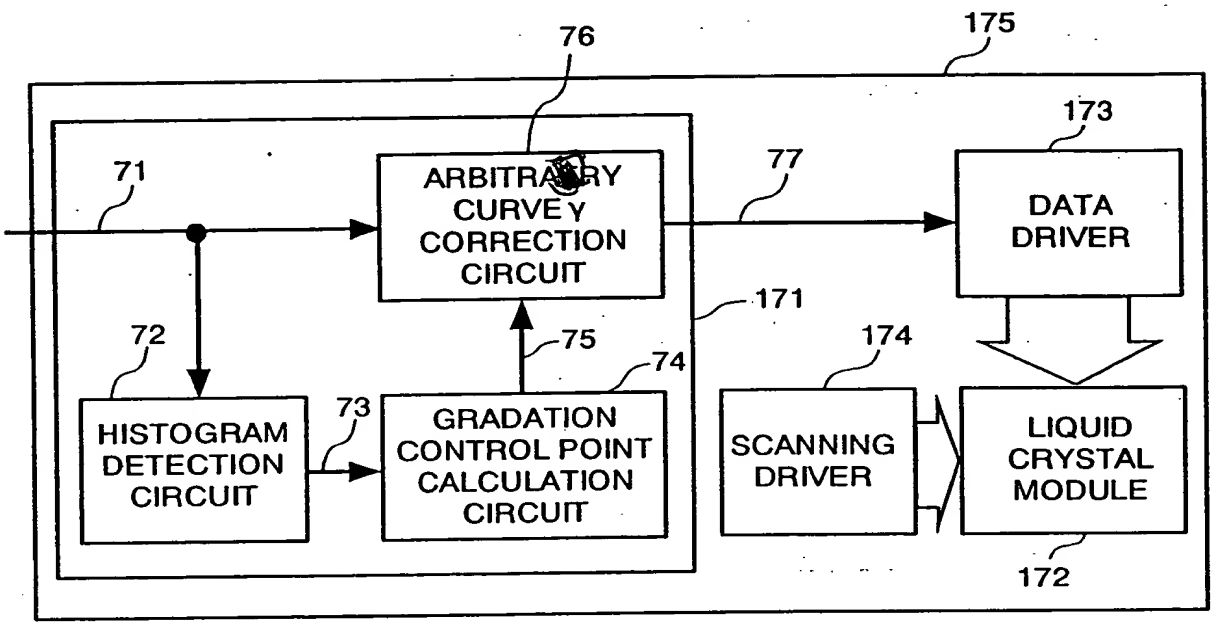

71
160
163
77
R
G
B
COLOR DECODER
76
161
ARBITRARY CURVE γ CORRECTION CIRCUIT
162
72
HISTOGRAM DETECTION CIRCUIT
73
75
GRADATION CONTROL POINT CALCULATION CIRCUIT
74

FIG.33


76
175
71
ARBITRARY CURVE γ CORRECTION CIRCUIT
77
173
DATA DRIVER
171
72
75
74
174
HISTOGRAM DETECTION CIRCUIT
73
GRADATION CONTROL POINT CALCULATION CIRCUIT
SCANNING DRIVER
LIQUID CRYSTAL MODULE
172